

Field Data Collection and Management Using ArcGIS®

STUDENT EDITION

Copyright © 2017–2024 Esri
All rights reserved.

Course version 12.1. Version release date April 2024.

Printed in the United States of America.

The information contained in this document is the exclusive property of Esri. This work is protected under United States copyright law and other international copyright treaties and conventions. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system, except as expressly permitted in writing by Esri. All requests should be sent to Attention: Director, Contracts and Legal, Esri, 380 New York Street, Redlands, CA 92373-8100, USA.

Export Notice: Use of these Materials is subject to U.S. export control laws and regulations including the U.S. Department of Commerce Export Administration Regulations (EAR). Diversion of these Materials contrary to U.S. law is prohibited.

The information contained in this document is subject to change without notice.

Commercial Training Course Agreement Terms: The Training Course and any software, documentation, course materials or data delivered with the Training Course is subject to the terms of the Master Agreement for Products and Services, which is available at <https://www.esri.com/~media/Files/Pdfs/legal/pdfs/ma-full/ma-full.pdf>. The license rights in the Master Agreement strictly govern Licensee's use, reproduction, or disclosure of the software, documentation, course materials and data. Training Course students may use the course materials for their personal use and may not copy or redistribute for any purpose. Contractor/Manufacturer is Esri, 380 New York Street, Redlands, CA 92373-8100, USA.

Esri Marks: Esri marks and product names mentioned herein are subject to the terms of use found at the following website: <https://www.esri.com/content/dam/esrisites/en-us/media/legal/copyrights-and-trademarks/esri-product-naming-guide.pdf>.

Other companies and products or services mentioned herein may be trademarks, service marks, or registered marks of their respective mark owners.

Table of Contents

Esri resources for your organization

Course introduction

Course introduction

Course goals

Installing the course data

Icons used in this workbook

1 ArcGIS field operations introduction

Lesson introduction

The geoinformation model in ArcGIS

Field activities overview

Explore ArcGIS field operations apps

Decision factors for data capture field apps

Choosing a data capture field app

Which apps support your field activities?

Lesson review

Answers to lesson 1 questions

2 Preparing for field operations

Lesson introduction

Controlling access with groups in ArcGIS Online

Exercise 2A: Create a group in ArcGIS Online

- Sign in to an ArcGIS Online organization

- Create a folder

- Create a group for sharing data

- Create a second group

- Configure the group

- Create a third group

- Configure the group

Content requirements for ArcGIS field apps

Preparing content for field apps

Improving data collection efficiency in field apps

Exercise 2B: Configure a feature layer in ArcGIS Online

- Publish a hosted feature layer from a zipped file geodatabase

- Update item details for the hosted feature layer

- Configure a list for a feature layer

Publishing a web map for field apps

Lesson review

Answers to lesson 2 questions

3 ArcGIS Field Maps introduction

Lesson introduction

ArcGIS Field Maps benefits

Configuration options in ArcGIS Field Maps Designer

The ArcGIS Field Maps Designer interface

Exercise 3A: Create a web map in ArcGIS Field Maps Designer

- Sign in to an ArcGIS Online organization

- Create a new web map and feature layer

- Configure item details

- Add layers to your web map

- Symbolize map layers

- Add new features

Explore app settings for the Field Maps mobile app

The ArcGIS Field Maps mobile app interface

Taking notes and drawing sketches with markup

Exercise 3B: Collect field notes in the ArcGIS Field Maps mobile app

- Sign in to the Field Maps mobile app

- Open a web map

- Create markers

- Draw sketches

- Share the markup

- Review the shared markup

Lesson review

Answers to lesson 3 questions

4 Configuring forms for data collection in ArcGIS Field Maps Designer

Lesson introduction

ArcGIS Field Maps forms

Form configuration options

Identify form elements

Configuring form elements in Field Maps Designer

Exercise 4A: Use Field Maps Designer to configure forms for data collection

- Sign in to an ArcGIS Online Organization

- Configure a form for a feature layer

- Configure a form for a related table

- Open the ArcGIS Field Maps mobile app

- Open the web map

- Place a new asset

- Conduct an inspection

- Review the new data

Adding logic to forms

Exercise 4B: Use Field Maps Designer to add logic to forms

- Configure conditional visibility

- Configure a calculated expression

- Configure a second calculated expression

- Review updated forms in the Field Maps mobile app

Lesson review

Answers to lesson 4 questions

5 Creating data collection forms in ArcGIS Survey123

Lesson introduction

ArcGIS Survey123 benefits

ArcGIS Survey123 components

ArcGIS Survey123 component functions

Exploring the ArcGIS Survey123 web designer interface

Exercise 5A: Create a form using the ArcGIS Survey123 web designer

- Sign in to an ArcGIS Online Organization

- Create a new survey

- Configure form questions

- Configure a form question rule

- Publish the survey

- Share the survey

- Download the survey on your device

- Submit surveys

- Create a web map

Creating forms using ArcGIS Survey123 Connect

Exercise 5B: Configure calculations for form questions in the web designer

- Write a question calculation

- Write a survey calculation

- Write a layer calculation

- Publish the survey

- Download the survey on your device

- Submit a survey

- View the survey submissions

Lesson review

Answers to lesson 5 questions

6 Updating a feature layer with ArcGIS QuickCapture

Lesson introduction

ArcGIS QuickCapture benefits

Relevant real-time observations

ArcGIS QuickCapture button creation

Preparing data for an ArcGIS QuickCapture project

Exercise 6A: Create the data for an ArcGIS QuickCapture project

- Create a feature layer

- Add a field

- Create a list of choices

- Configure editor tracking

- Symbolize the layer

- Share the web map

ArcGIS QuickCapture project configuration options

Exercise 6B: Capture observations with ArcGIS QuickCapture

- Create a QuickCapture project

- Configure the button position

- Configure the button symbology

- Group the buttons

- Prepare to share your project

- Use the mobile app on your device

- View observations in a web map

Lesson review

Answers to lesson 6 questions

7 Organizing your field activities with ArcGIS Dashboards

Lesson introduction

ArcGIS Dashboards benefits

ArcGIS Dashboards elements

Sources of data for ArcGIS Dashboards

Configuration settings for dashboard elements

Exercise 7: Create an interactive dashboard to display field activity

- Create a dashboard in ArcGIS Dashboards

- Add a map element to the dashboard

- Add a list element to the dashboard

- Add an indicator element to the dashboard

- Add interactivity between elements

Lesson review

Answers to lesson 7 questions

Appendices

Appendix A: Esri data license agreement

Appendix B: Answers to lesson review questions

Appendix C: Additional resources